

REMARKS

The above amendment with the following remarks is submitted to be fully responsive to the Office Action dated April 23, 2008. Reconsideration of this application in light of the amendment and the allowance of this application are respectfully requested.

Claims 1, 3-4, 9-12, 19-23, 29-31 and 33-60 were pending in the present application prior to the above amendment. In response to the Office Action, claims 1, 9, 19 39 and 41-60 are amended to clarify the invention, and not for reasons of patentability, no claims are canceled, and no new claims are added. Claims 5-8, 13-18 and 24-28 remain withdrawn for being directed to a non-elected invention. Claims 2, 23, 32 and 35-36 were canceled without prejudice or disclaimer in a previous amendment. Therefore, claims 1, 3-4, 9-12, 19-23, 29-31, 33-34, and 37-60 are now pending in the present application.

In view of the above amendments and the following remarks, Applicant respectfully requests reconsideration and allowance of the application.

Rejections under 35 U.S.C. §103

Claims 1 and 3-4, 9-12, 19-23, 29-31, 33-34, and 37-60 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Kawase et al. (U.S. Pat. Pub. No. 2002/0067400) (*Kawase*) in view of Yamazaki (EP 1,071,117 A2) (*Yamazaki*), Muehlberger (U.S. Patent No. 5,679,167) (*Muehlberger '167*), and Muehlberger et al. (U.S. Patent No. 4,328,257) (*Muehlberger '257*). Applicant traverses this rejection as follows.

The present independent claims 1, 9 and 19, and the claims dependent therefrom, are patentably distinguishable over *Kawase*, *Yamazaki*, *Muehlberger '167* and *Muehlberger '257*, either taken alone or in combination, since these references fail to disclose, teach or suggest all the features recited in the pending claims. For example, independent claim 1 (emphasis added), recites:

A semiconductor manufacturing apparatus comprising:
a plasma generating device for generating a plasma;
a first chamber for performing a plasma treatment on an object
by the plasma therein under atmospheric pressure or approximate to
atmospheric pressure;
a rail for sliding the plasma generating device, the rail provided
in the first chamber; and
an ink-jet device for applying a droplet to the object,
wherein the plasma generating device is provided in the first
chamber,
wherein the ink-jet device is provided in a second chamber, and

wherein the object is transferred in the first chamber along a first direction and the plasma generating device is moved in the first chamber along the rail and along a second direction intersecting with the first direction and in a direction parallel to an edge of the object.

Independent claim 9 (emphasis added), recites:

A semiconductor manufacturing apparatus comprising:
at least one plasma generating device for generating a plasma;
a first chamber for performing a plasma treatment on an object by the plasma therein under atmospheric pressure or approximate to atmospheric pressure;
a rail for sliding the plasma generating device, the rail provided in the first chamber; and
at least one ink-jet device for applying a droplet to the object, wherein the plasma generating device is provided in the first chamber,
wherein the ink-jet device is provided in a second chamber,
wherein the object is transferred in the first chamber along a first direction and the plasma generating device is moved in the first chamber along the rail and along a second direction intersecting with the first direction and in a direction parallel to an edge of the object, and
wherein the ink-jet device is moved in the second chamber along a third direction intersecting with the first direction.

Independent claim 19 (emphasis added), recites:

A semiconductor manufacturing apparatus comprising:
at least one plasma generating device for generating a plasma;
a first chamber for performing a plasma treatment on an object by the plasma therein under atmospheric pressure or approximate to atmospheric pressure;
a rail for sliding the plasma generating device, the rail provided in the first chamber; and
at least one ink-jet device for applying a droplet to the object, wherein the plasma generating device is provided in the first chamber,
wherein the ink-jet device is provided in a second chamber,
wherein the object is transferred in the first chamber along a first direction and the plasma generating device is moved in the first chamber along the rail and along a second direction intersecting with the first direction and in a direction parallel to an edge of the object, and
wherein the ink-jet device is moved in the second chamber along a third direction intersecting with the first direction.

Thus, independent claims 1, 9 and 19 are directed to the novel features of the object being transferred in the first chamber along a first direction and the plasma generating device being moved in the first chamber along the rail and along a second direction intersecting with the first direction and in a direction parallel to an edge of the object.

Applicant respectfully submits that the present independent claims 1, 9 and 19 are patentably distinguishable over *Kawase*, *Yamazaki*, *Muehlberger* '167 and *Muehlberger* '257, taken alone or in combination. Specifically, these references are completely silent with regard to the object being transferred in the first chamber along a first direction and the plasma generating device being moved in the first chamber along the rail and along a second direction intersecting with the first direction and in a direction parallel to an edge of the object, as substantially recited in independent claims 1, 9 and 19.

The Examiner alleges that *Kawase* discloses...a plasma generating device for generating a plasma and processing an object under atmospheric pressure or approximate atmospheric pressure, and an ink jet device for applying a droplet to the object.

Further, the Examiner alleges that *Yamazaki* teaches providing a plurality of processing chambers in a single semiconductor processing apparatus for the purpose performing a multi-step processing method without the object being processed touching open air.

Furthermore, the Examiner alleges that *Muehlberger* '167 disclose providing a plasma spraying device with a motion control device for the purpose of producing oscillating yaw or other motions of the plasma spraying device. Further, the Examiner alleges that although the disclosure of *Muehlberger* '167 does not explicitly disclose that the motion is perpendicular to the direction in which the object is transferred in/into the chamber, the disclosure does fairly teach that specific motion of the plasma spraying device can be chosen to produce a desired pattern.

Additionally, the Examiner alleges that Figure 3 of the *Muehlberger* '257 reference discloses a gun motion mechanism that is provided to slide along a rail/rails (see page 5, paragraph 13 of the Office Action dated April 23, 2008).

In response, Applicant notes that amended independent claims 1, 9 and 19 recite that the object is transferred in the first chamber along a first direction and the plasma generating device is moved in the first chamber along the rail and along a second direction intersecting with the first direction *and in a direction parallel to an edge of the object*. Applicant

respectfully submits that neither *Kawase, Yamazaki, Muehlberger* '167 nor *Muehlberger* '257, taken either alone or in combination, teach, disclose, or suggest that the object is transferred in the first chamber along a first direction and the plasma generating device is moved in the first chamber along the rail and along a second direction intersecting with the first direction and in a direction parallel to an edge of the object, as substantially recited in independent claims 1, 9 and 19. Therefore, the present invention as claimed in independent claims 1, 9 and 19 is neither anticipated by nor rendered obvious over the disclosures of *Kawase, Yamazaki, Muehlberger* '167 or *Muehlberger* '257, either taken alone or in combination. Thus, Applicant respectfully requests the withdrawal of this rejection.

Moreover, Claims 3-4, 10-12, 20-23, 29-31, 33-34, and 37-60 are allowable at least by virtue of their respective dependencies from either independent claims 1, 9 or 19, but are also distinguishable over the prior art. Thus, Applicant respectfully requests the withdrawal of this rejection.

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. If, however, the Examiner deems that any issue remains after considering this response, the Examiner is invited to contact the undersigned attorney to expedite the prosecution and engage in a joint effort to work out a mutually satisfactory solution.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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